

CLAIMS

1. A wire rod feeding device for feeding a wire rod formed of a soft material, wherein the wire rod is gripped and released, and is run out by a chuck body which is movable back and forth; and opening means for keeping an opened state of the chuck body is provided.
2. A wire rod feeding device for feeding a wire rod formed of a soft material, wherein the wire rod is gripped and released, and is run out by a chuck body which is movable back and forth; and a returning operation of an operating member for operating the chuck body is performed gradually.
3. A wire rod feeding device for feeding a wire rod formed of a soft material, wherein the wire rod is gripped and released, and is run out by a chuck body which is movable back and forth; and the length of a wire rod gripping portion of the chuck body is set so as to be longer than the running-out amount of the wire rod.
4. A wire rod feeding device for feeding a wire rod formed of a soft material, wherein wire rod storage means for storing the soft wire rod is provided on a device body.
5. The wire rod feeding device according to claim 2, wherein a knock piece for operating the chuck body is arranged on a side wall of a barrel in an exposed state; opening means for

opening the chuck body by pressing the knock piece in the radial direction of the barrel is arranged so as to be movable back and forth with respect to the barrel; and a small-diameter portion and a large-diameter portion are formed successively 5 on the inner surface of the opening means toward the knock piece.

6. The wire rod feeding device according to claim 2, wherein a knock piece for operating the chuck body is arranged on a 10 side wall of a barrel in an exposed state; opening means for opening the chuck body by pressing the knock piece in the radial direction of the barrel is arranged so as to be movable back and forth with respect to the barrel; and
the knock piece is formed successively with step portions, 15 which have a different height in the pressing direction of the knock piece, toward the moving direction of the opening means.

7. The wire rod feeding device according to claim 2, wherein 20 a knock piece for operating the chuck body is arranged on a side wall of a barrel in an exposed state; opening means for opening the chuck body by pressing the knock piece in the radial direction of the barrel is arranged so as to be movable back and forth with respect to the barrel; and
25 the knock piece is formed with an inclined surface, which is inclined in the pressing direction of the knock piece, toward the moving direction of the opening means.

8. The wire rod feeding device according to claim 3, wherein
a chuck ring for opening and closing the chuck body is arranged
at the outer periphery in front of the chuck body; and the
5 movement amount of the chuck ring is set so as to be shorter
than the length of a wire rod gripping portion of the chuck
body.

9. The wire rod feeding device according to claim 4, wherein
10 the wire rod storage means is detachably provided on the device
body.

10. The wire rod feeding device according to claim 4, wherein
the wire rod storage means is exposed from the device body.
15

11. The wire rod feeding device according to claim 4, wherein
the wire rod is wound around the wire rod storage means.

12. The wire rod feeding device according to claim 4, wherein
20 the wire rod storage means is provided rotatably.

13. The wire rod feeding device according to claim 4, wherein
rotation resistance is given to the wire rod storage means.

25 14. The wire rod feeding device according to claim 4, wherein
the wire rod is gripped and released, and is run out by a chuck
body which is movable back and forth; and opening means for

the chuck body is provided on the device body, and the wire rod storage means is arranged on the opening means.

15. The wire rod feeding device according to claim 4, wherein
5 the wire rod storage means is a reel member formed with
disc-shaped collar portions at both ends of a winding portion.

16. The wire rod feeding device according to claim 4, wherein
rotation preventing means is provided on the outside of the
10 feeding device.

17. The wire rod feeding device according to claim 16, wherein
the rotation preventing means is an expanding portion.

15 18. The wire rod feeding device according to claim 16, wherein
the rotation preventing means is of a polygonal or irregular
shape.

19. The wire rod feeding device according to any one of claims
20 1 to 4, wherein the wire rod feeding device is a device for
feeding a wire rod formed of a soft material; the wire rod
is gripped and released, and is run out by a chuck body which
is movable back and forth; and a wire rod protective pipe is
provided in front of the chuck body, the inside diameter of
25 the wire rod protective pipe being two times or less the outside
diameter of the wire rod used.

20. The wire rod feeding device according to any one of claims 1 to 4, wherein the wire rod feeding device is a device for feeding a wire rod formed of a soft material; the wire rod is gripped and released, and is run out by a chuck body which 5 is movable back and forth; and a wire rod protective pipe is provided in front of the chuck body, the inside diameter of the wire rod protective pipe being 1.25 times or more the outside diameter of the wire rod used.

10 21. The wire rod feeding device according to any one of claims 1 to 3, wherein a wire rod guide member is provided between the chuck body and a wire rod protective pipe, and the maximum inside diameter of the wire rod guide member is two times or more of the outside diameter of the wire rod used.

15

22. The wire rod feeding device according to any one of claims 1 to 3, wherein a wire rod inserting member is arranged at the rear of the chuck body, and conical portions are formed on the inner and outer surfaces of the wire rod inserting member.

20

23. The wire rod feeding device according to any one of claims 1 to 3, wherein a wire rod guide pipe is inserted in the chuck body, and a wire rod inserting member is arranged at the rear end of the wire rod guide pipe.

25

24. The wire rod feeding device according to any one of claims 1 to 3, wherein a pipe is provided at least on one side in

the longitudinal direction of the chuck body, and the pipe and the chuck body move in association with each other.

25. The wire rod feeding device according to any one of claims 5 1 to 4, wherein the soft wire rod is a wire solder or a resin flux cored solder.

26. The wire rod feeding device according to claim 25, wherein the wire solder or the resin flux cored solder is wound around 10 a reel member formed with disc-shaped collar portions at both ends of a winding portion.

27. A wire solder used for a wire rod feeding device, wherein: the wire rod is gripped by and released from the wire 15 rod feeding device and is run out by a chuck body which is movable back and forth, and opening means for keeping an opened state of the chuck body is provided; and wherein the wire solder is formed of a material having a hardness equal to or lower than 20 in the Brinell hardness test.

20

28. The wire solder according to claim 27, wherein the wire solder is wound around a reel member formed with disc-shaped collar portions at both ends of a winding portion.